

West Virginia Department of Environmental Protection

Division of Air Quality

Earl Ray Tomblin

Governor

Randy C. Huffman

Cabinet Secretary

Class II General Permit

G70-D

for the

Prevention and Control of Air Pollution in regard to the

Construction, Modification, Relocation, Administrative Update and

Operation of Natural Gas Production Facilities Located at the Well Site

This permit is issued in accordance with the West Virginia Air Pollution Control Act

(West Virginia Code §§ 22-5-1 et seq.) and 45CSR13 -Permits/or Construction, Modification, Relocation

and Operation o/Stationary Sources o/ Air Pollutants,

Notification Requirements, Temporary Permits, General Permits and Procedures/or Evaluation.

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Director

Issued: September 30,2016

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. Natural Gas Production Facility

Class II General Permit G70-D supersedes and replaces General Permit G70-C issued on June 1, 2016.

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person

who participated in the public comment process, by a penn it issued, modified or denied by the Secretary may appeal

such action of the Secretary to the Air Quality Board pursuant to article one [§§22B-1-1 et seq.], Chapter 22B of

the Code of West Virginia. West Virginia Code §§22-5-14.

The source is not subject to 45CSR30.

General Penni! G70-D authorizes the construction, modification, administrative update and/or operation of natural

gas production facilities. The applicability of General Penni! G70-D may include any ofthe/ollowing: gas wells

and associated equipment, natural gas-fired spark ignition internal combustion engines, diesel-fired compression

ignition internal combustion engines, storage vessels/tanks, glycol dehydration units and associated equipment,

equipment leaks, truck and rail car loading operations, pneumatic pumps and pneumatic controllers.

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1.0. Emission Units

1.1. General Permit Registration

1.1.1. The registered facility shall not exceed the following facility-wide regulated pollutant emission

limits. The fugitive emissions of a stationary source shall not be considered in determining

whether it is a major stationary source for the purposes of 45CSR30-2.26.b or for eligibility of this

General Permit.

Pollutant

Maximum Annual Emission Limit

(tons/y_eari

Nitrogen Oxides 50

Carbon Monoxide 80

Volatile Organic Compounds 80

Particulate Matter- 10/2.5 20

Sulfur Dioxide 20

1.1.2. The registered facility shall not exceed 8 tons per year for each individual Hazardous Air

Pollutant (HAP) or 20 tons per year of aggregated HAPs.

1.1.3. The registrant shall notify the Secretary, in writing, no later than fifteen (15) calendar days after

the actual startup of any alternative operating scenario or combination of alternative operating

scenarios. Alternative operating scenarios are listed below:

a. Increases in condensate/produced water tank throughputs that result in total facility emissions

less than or equal to the pollutant limitations established in sections 1.1.1 and 1.1.2 of this

general permit.

b. Increases in truck loading/rail car loading throughputs or change in truck/rail car certification

established in section 14.1.2 that result in total facility emissions less than or equal to the

pollutant limitations established in sections 1.1.1 and 1.1.2 of this general permit. Only one

(1) truck/rail car loading certification change allowed per calendar year.

c. Air pollution control device and emission reduction device additions, removals and replacements that result in total facility emissions less than or equal to the pollutant

limitations established in sections 1.1.1 and 1.1.2 of this general permit.

d. Replacement of like kind air emission units.

e. Addition of air emission units (excluding engines identified in sections 1.1.3.f and 1.1.3 .g)

that results in total facility emissions less than or equal to the pollutant limitations established

in sections 1.1.1 and L 1.2 of this general permit.

f. Replacement of engines that result in an emissions increase or decrease less than 45CSR13

permitting thresholds and possess an EPA Certificate of Conformity to show compliance with

40CFR60 Subparts IIII andlor JJJJ.

g. Replacement of engines that result in an emissions increase or decrease less than 45CSR13

permitting thresholds and are not subject to performance testing requirements under 40CFR60

Subparts IITI andlor JJJJ andlor 40CFR63 Subpart zzzz. .

h. Replacement of engines that previously conducted a performance test under 40CFR60

Subparts IIII andlor JJJJ with a smaller engine (less HP) subject to performance testing

requirements under 40CFR60 Subparts nn andlor JJJJ andlor 40CFR63 Subpart ZZZZ.

i. Removal of low pressure towers/stabilization equipment subject to Section 6.1.4 that result in

total facility emissions less than or equal to the pollutant limitations established in sections

1.1.1 and 1.1.2 of this general permit.

Alternative operating scenarios are done at the registrant's own risk

1.1.4. G70-D Annual Certification. Annually from the date of G70-C or G70-D registration issuance

(or alternate date requested by the registrant and established in the G70-C or G70-D Registration),

the registrant shall prepare and submit a G70-D Annual Certification for the previous year,

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addressing the potential emissions from the facility (using a generally accepted model or

calculation methodology) and an updated Emission Units/ERD/APCD table (if necessary). The

registrant shall pay an annual \$1,000 certification fee. The fee shall be paid by negotiable

instrument made payable to the "DEP-Division of Air Quality."

1.1.5. Minor Source. The registrant shall maintain records of annual HAP and all other regulated air

pollutant emissions using AP-42 emission factors, GRI-GLYCalc model inputs and outputs, flashing simulation model inputs and outputs, manufacturer guaranteed values, sample and/or test

data, or other methods approved by DAQ demonstrating that facility-wide emissions are less than

those specified in Sections 1.1.1 and 1.1.2. To demonstrate compliance with sections 1.1.1 and

1.1.2 of this general permit, the registrant shall maintain a record of the emissions on a rolling

twelve (12) month total.

2.0. General Conditions

2.1. Purpose

The purpose of this Class II General Permit is to authorize the construction, modification, administrative

update, relocation, and operation of eligible natural gas production facilities located at the well site through

a Class II General Permit Registration process. The requirements, provisions, standards and conditions of

this Class II General Permit address the prevention and control of regulated pollutants from the operation of

a natural gas production facility located at the well site.

2.2. Authority

This permit is issued in accordance with West Virginia air pollution control law W.Va. Code §§ 22-5-1. et

seq. and the following Legislative Rules promulgated thereunder:

2.2.1. 45CSR13 -Permits/or Construction, Modification, Relocation and Operation o/Stationary

Sources o/ Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures/or Evaluation.

2.3. Applicability

2.3.1. All natural gas production facilities located at the well site designed and operated for the purpose

of producing natural gas and included in the following NAICS and/or SIC codes are eligible for

General Permit registration except for those instances listed in (a) through (h) below:

NAICS Code SIC Code Description

211111 1311 Crude Petroleum and Natural Gas Extraction

213112 1382,1389 Support Activities for Oil and Gas Operations

a. Any natural gas production facility which is a major source of pollutants as defined in

45CSR14, 45CSR19 or 45CSR30.

b. Any natural gas production facility that is located in Putnam County, Kanawha County,

Cabell County, Wayne County, or Wood County and is required by 45CSR21 to conduct a Reasonably Available Control Technology (RACT) Analysis and/or subject to 45CSR21 Section 29 (Leaks from Natural Gas/Gasoline Processing Equipment).

c. Any natural gas processing plant (e.g. production of ethane, propane, butane, and

pentane) as

defined in 40 CFR §60.5430.

d. Any natural gas sweetening plant.

e. Any natural gas production facility with a storage tank: subject to NSPS, Subpart Kb.

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f. Any steam generating unit (as defined in §60.41c) subject to NSPS, Subpart Dc (> 10 MMBTU/hr).

g. Any turbine subject to NSPS, Subpart KKKK.

h. Any natural gas production facility which will require an individual air quality pennit review

process (45CSR13 construction/modification permit) to incorporate regulatory requirement(s)

other than those established by General Permit G70-D. This would include "synthetic minor" permitting actions, as they are required to undergo Notice Level C under 45CSR13 Section 8.5. "Synthetic minor" permitting actions would include limitations on physical or

operational capacity to remain below major stationary source thresholds (including 45CSR14,

45CSR19, 45CSR30 and 45CSR34).

2.3.2. For the purposes of General Pennit G70-D, gas well means an onshore well drilled principally for

production of natural gas and/or oil. Well completion means the process that allows for the

flowback of petroleum or natural gas from newly drilled wells to expel drilling and reservoir fluids

and tests the reservoir flow characteristics, which may vent produced hydrocarbons to the

atmosphere via an open pit or tank.

2.3.3. For the purposes of General Permit G70-D, natural gas production facility activities refers to

natural gas well completion operations; separation of the condensate, natural gas and water in gas

production units; additional separation of the' natural gas, condensate, oil and water emulsion in

heater treaters; compression of the natural gas; dehydration of the natural gas; storage of the

condensate, oil and produced water; and, loading of tanker trucks/rail cars to transport condensate,

oil and produced water from the facility.

2.3.4. The West Virginia Division of Air Quality reserves the right to reopen this permit or any

authorization issued under this permit if the area in which the facility is located is federally

designated as non-attainment for specified pollutants. If subsequently any proposed construction, modification and/or operation does not demonstrate eligibility and/or compliance with the requirements, provisions, standards and conditions of this General Permit, this General Permit registration shall be denied and an individual permit for the proposed activity shall be required.

2.4. Definitions

2.4.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act"

mean those provisions contained in W.Va. Code §§ 22-5.

2.4.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.4.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other

person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6

or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's

designated representative for the purposes of this permit.

2.4.4. The terms established in applicable definitions codified in the Code of Federal Regulations

including 40 CFR Part 60 NSPS Subparts A, IIII, JJJJ, 0000 and 0000a or 40 CFR Part 63 MACT Subparts A, HH and ZZZZ shall also apply to those sections of General Permit G70-D where these subparts are incorporated or otherwise addressed.

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2.5.

2.6.

Acronyms

BBL or bbl Barrel

CAAA Clean Air Act Amendments NOx Nitrogen Oxides

CBI Confidential Business NSCR Non Selective Catalytic

Infonation Reduction

CEM Continuous Emission Monitor NSPS New Source Performance

CES Certified Emission Statement Standards

C.F.R. Code of Federal Regulations PM Particulate Matter

CO Carbon Monoxide PM2.s Particulate Matter less than 2.5

C.S.R. Code of State Rules Jlm in diameter

DAQ Division of Air Quality PM 10 Particulate Matter less than 10

DEP Department of Environmental Jlm in diameter
Protection ppm Parts per million
FOIA Freedom of Information Act ppmv Parts per million by Volume
HAP Hazardous Air Pollutant PSD Prevention of Significant
HP Horsepower Deterioration
lblhr Pounds per hour psi Pounds per square inch
LDAR Leak Detection and Repair RICE Reciprocating Internal
Morm Thousand Combustion Engine
MACT Maximum Achievable SCR Selective Catalytic Reduction
Control Technology SIC Standard Industrial
MDHI Maximum Design Heat Input Classification
MM or mm Million SIP State Implementation Plan
MMBTU/hr Million British Thermal Units S02 Sulfur Dioxide
Per Hour TAP Toxic Air Pollutant
MMCF/hr Million Cubic Feet per Hour TPY Tons per year
N/A Not Applicable TSP Total Suspended Particulate
NAAQS National Ambient Air Quality USEPA United States Environmental
Standards Protection Agency
NESHAPS National Emissions Standards UTM Universal Transverse Mercator
for Hazardous Air Pollutants VEE Visual Emissions Evaluation
LAT Latitude VOC Volatile Organic Compounds
LON Longitude VRU Vapor Recovery Unit
Permit Expiration and Renewal

2.6.1. This Class II General Permit shall remain valid, continuous and in effect unless it is revised,

suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other

applicable legislative rule.

2.6.2. General Permit registrations granted by the Secretary shall remain valid, continuous and in effect

unless suspended or revoked by the Secretary. If the Class II General Permit registration is subject

to action or change, existing registrations will continue to be authorized and subject to the

previously established permit conditions. [45CSR§13-10.2, 45CSR§13-10.3]

2.7. Administrative Update to General Permit Registration

2.7.1. The registrant may request an administrative update to their General Permit registration as defined

in and according to the procedures specified in 45CSR§ 13-4.

[45CSR§13-4.]

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2.S. Modification to General Permit Registration

2.8.1. The registrant may request a minor permit modification to their General Permit registration as

defined in and according to the procedures specified in 45CSR§ 13-5. [45CSR§13-5.]

2.8.2. Any changes to the facility listed as an Alternative Operating Scenario under section 1.1.3 of this

general permit are not subject to modification requirements specified in 45CSR§ 13-5 if the

registrant complies with the applicable requirements in section 1.1.3.

2.9. Duty to Comply

2.9.1. The registered facility shall be constructed and operated in accordance with the information filed

in the General Permit Registration Application, alternative operating scenario notifications per

section 1.1.3 of this general permit, any amendments thereto or facility changes that do not meet

the definition of modification as defined in 45CSR13. The Secretary may suspend or revoke a

General Permit registration if the plans and specifications upon which the approval was based are

not adhered to.

2.9.2. The registrant must comply with all applicable conditions of this Class n General Permit. Any

General Permit noncompliance constitutes a violation of the West Virginia Code, and/or the Clean

Air Act, and is grounds for enforcement action by the Secretary or USEP A.

2.9.3. Violation of any of the applicable requirements, provisions, standards or conditions contained in

this Class n General Permit, or incorporated herein by reference, may subject the registrant to civil

and/or criminal penalties for each violation and further action or remedies as provided by West

Virginia Code 22-5-6 and 22-5-7.

2.9.4. Registration under this Class n General Permit does not relieve the registrant herein of the

responsibility to apply for and obtain all other permits, licenses, and/or approvals from other

agencies; i.e. local, state and federal, which may have jurisdiction over the construction and/or

operation of the source(s) and/or facility herein permitted.

2.10. Inspection and Entry

2. 10.1. The registrant shall allow any authorized representative of the Secretary, upon the presentation of

credentials and other documents as may be required by law, to perform the following:

a. At all reasonable times enter upon the registrant's premises where a source is located or

emissions related activity is conducted, or where records must be kept under the conditions of

this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the

conditions of this Class II General Permit;

c. Inspect at reasonable times (including all times in which the facility is in operation) any

facilities, equipment (including monitoring and air pollution control equipment), practices, or

operations regulated or required under this Class II General Permit;

d. Sample or monitor at reasonable times, substances or parameters to determine compliance

with the permit or applicable requirements or ascertain the amounts and types of air pollutants

discharged.

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2.11. Need to Halt or Reduce Activity not a Defense

2.11.1. It shall not be a defense for a registrant in an enforcement action that it would have been necessary

to halt or reduce the permitted activity in order to maintain compliance with the conditions of this

Class II General Permit. However, nothing in this paragraph shall be construed as precluding

consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for

noncompliance if the health, safety, or environmental impacts of halting or reducing operations

would be more serious than the impacts of continued operations.

2.12. Emergency

2.12.1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events

beyond the control of the source, including acts of God, which situation requires immediate

corrective action to restore normal operation, and that causes the source to exceed a technology-based

emission limitation under this Class II General Permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the

extent caused by improperly designed equipment, lack of preventative maintenance, careless or

improper operation, or operator error.

2.12.2. In any enforcement proceeding, the registrant seeking to establish the occurrence of an emergency

has the burden of proof.

2.12.3. This provision is in addition to any emergency or upset provision contained in any applicable

requirement.

2.13. Federally-Enforceable Requirements

2.13 .1. All terms and conditions in this permit are enforceable by the Secretary, USEP A, and citizens

under the Clean Air Act.

2.13.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become

"Federally-Enforceable" requirements upon SIP approval by the USEPA.

2.14. Duty to Provide Information

2. 14.1. The registrant shall furnish to the Secretary within a reasonable time any information the Secretary

may request in writing to determine whether cause exists for modifying, revoking and reissuing, or

terminating this Class II General Permit Registration or to determine compliance with this General

Permit. Upon request, the registrant shall also furnish to the Secretary copies of records required

to be kept by the registrant. For information claimed to be confidential, the registrant shall furnish

such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31.

If confidential information is to be sent to USEP A, the registrant shall directly provide such

information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

2.15. Duty to Supplement and Correct Information

2.15.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect

information in any registration application, the registrant shall promptly submit to the Secretary

such supplemental facts or corrected information.

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2.16. Credible Evidence

2. 16.1. Nothing in this Class II General Permit shall alter or affect the ability of any person to establish

compliance with, or a violation of, any applicable requirement through the use of credible

evidence to the extent authorized by law. Nothing in this pennit shall be construed to waive any

defenses otherwise available to the registrant including but not limited to any challenge to the

credible evidence rule in the context of any future proceeding.

2.17. Severability

2.17.1. The provisions of this Class II General Permit are severable. If any provision of this Class II

General Permit, or the application of any provision of this Class II General Permit to any

circumstance is held invalid by a court of competent jurisdiction, the remaining Class II General

Permit terms and conditions or their application to other circumstances shall remain in full force

and effect.

2.18. Property Rights

2.18.1. Registration under this Class II General Permit does not convey any property rights of any sort or

any exclusive privilege.

2.19. Notification Requirements

2.19.1. The registrant shall notify the Secretary, in writing, no later than thirty (30) calendar days after the

actual startup of the operations authorized under this permit except as required under section 1.1.3

(e.g. 15 days after alternative operating scenario startup).

2.20. Suspension of Activities

2.20.1. In the event the registrant should deem it necessary to suspend, for a period in excess of one (1)

year, all operations authorized by this permit, the registrant shall notify the Secretary, in writing,

within two (2) calendar weeks of the passing of the one (1) year of the suspension period.

2.21. Transferability

2.21.1. This permit is transferable in accordance with the requirements outlined in Section 10.1 of

45CSR13. [45CSR§13-10.1.]

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3.0. Facility-Wide Requirements

3.1. Siting Criteria

3.1.1. All persons submitting a Class II General Permit Registration Application to construct, modify or

relocate a natural gas production facility shall be subject to the following siting criteria:

a. No emission unit shall be constructed, located or relocated within 300 feet of any occupied

dwelling, business, public building, school, church, community building, institutional building or public park. An owner of an occupied dwelling or business may elect to waive the

300 foot siting criteria.

b. Any person proposing to construct, modify or relocate any emission unit(s) within 300 feet of

any occupied dwelling, business, public building, school, church, community, institutional

building or public park may elect to obtain an individual permit pursuant to 45CSR13.

3.2. Limitations and Standards

3.2.1. Open burning. The open burning of refuse by any person is prohibited except as noted in

45CSR§6-3.1.

[45CSR§6-3;1.]

3.2.2. Open burning exemptions. The exemptions listed in 45CSR§6-3.1 are subject to the following

stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open

burning during existing or predicted periods of atmospheric stagnation. Notification shall be made

by such means as the Secretary may deem necessary and feasible.

[45CSR§6-3.2.]

3.2.3. Asbestos. The registrant is responsible for thoroughly inspecting the facility, or part of the

facility, prior to commencement of demolition or renovation for the presence of asbestos and

complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The registrant,

owner, or operator must notify the Secretary at least ten (10) working days prior to the

commencement of any asbestos removal on the forms prescribed by the Secretary if the registrant

is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). USEPA, the Division of Water and Waste Management (DWWM), and the Department of Health and Human Resources (DHHR) - Office of Environmental Health Services (OEHS) require a copy of this

notice to be sent to them.

[40CFR§61.145(b) and 45CSR§34]

3.2.4. Odor. No person shall cause, suffer, allow or permit the discharge of air pollutants which cause

or contribute to an objectionable odor at any location occupied by the public.

[45CSR§4-3.1] (State Enforceable Only)

3.2.5. Permanent shutdown. A source which has not operated at least 500 hours in one, twelve (12)

month period within the previous five (5) year time period may be considered permanently

shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or

application for new permits may be required for any source determined to be permanently shutdown. This requirement does not apply to emergency generator(s) permitted to operate only

500 hours per year.

[45CSR§13-10.5.]

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3.2.6. Standby plan for reducing emissions. When requested by the Secretary, the registrant shall

prepare standby plans for reducing the emissions of air pollutants in accordance with the

objectives set forth in Tables I, II, and III of 45CSR11.

[45CSR§ 11-5.2.J

3.2.7. Minimization of Fugitive Emissions. The registrant shall operate consistent with information

provided in registrant'S G70-D General Permit Registration Application for fugitive emission

sources.

[45CSR§ 13-5.11.J

3.3. Monitoring Requirements

See Section 4.2.

3.4. Testing Requirements

3.4 .1. Stack testing. As per provisions set forth in this permit or as otherwise required by the Secretary,

in accordance with the West Virginia Code, underlying regulations, permits and orders, the

registrant shall conduct testes) to determine compliance with the emission limitations set forth in

this Class II General Permit andlor established or set forth in underlying documents. The

Secretary, or their duly authorized representative, may at his/her option witness or conduct such

testes). Should the Secretary exercise his/her option to conduct such testes), the operator shall

provide all necessary sampling connections and sampling ports to be located in such manner as the

Secretary may require, power for test equipment and the required safety equipment, such as

scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such

tests shall be conducted in accordance with the methods and procedures set forth in this permit or

as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or

alternative testing to the test methods specified in the permit for demonstrating compliance

with 40 C.F.R. Parts 60,61, and 63 in accordance with the Secretary's delegated authority and

any established equivalency determination methods which are applicable. If a testing method

is specified or approved which effectively replaces a test method specified in the Class II

General Permit, the permit may be revised in accordance with 4SCSR§ 13-4. or 4SCSR§ 13-S.4

as applicable.

b. The Secretary may on a source-specific basis require, approve or specify additional testing or

alternative testing to the test methods specified in the Class II General Permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the

Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used

in approving such changes under Section 3.4. La. of this general permit. If a testing method is

specified or approved which effectively replaces a test method specified in the permit, the

permit may be revised in accordance with 4SCSR§ 13-4. or 4SCSR§ 13-S.4 as applicable.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in

discharge stacks and such other tests as specified in this Class II General Permit shall be

conducted in accordance with an approved test protocol. Such protocols shall be submitted to

the Secretary in writing at least thirty (30) days prior to any testing and shall contain the

information set forth by the Secretary. In addition, the registrant shall notify the Secretary at

least fifteen (15) days prior to any testing so the Secretary may have the opportunity to

observe such tests. This notification shall include the actual date and time during which the

test will be conducted and, if appropriate, verification that the tests will fully conform to a

referenced protocol previously approved by the Secretary.

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d. The registrant shall submit a report of the results of the stack test within sixty (60) days of

completion of the test. The test report shall provide the information necessary to document

the objectives of the test and to determine whether proper procedures were used to accomplish

these objectives and any operating parameters required to be monitored. The report shall

include the following: the certification described in paragraph 3.6.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which

form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language;
2. The result of the test for each permit or rule condition; and,
3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a) (14-15) and 45CSR13]

3.5. Recordkeeping Requirements

3.5.1. Retention of records. The registrant shall maintain records of all information (including

monitoring data, support information, reports, and notifications) required by this permit recorded

in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records. The files shall be maintained for at

least five (5) years following the date of each occurrence, measurement, maintenance, corrective

action, report, or record. Said records shall be maintained on site or in a readily accessible off-site

location maintained by the registrant for a period of five (5) years. Said records shall be readily

available to the Secretary of the Division of Air Quality or his/her duly authorized representative

for expeditious inspection and review. Any records submitted to the agency pursuant to a

requirement of this permit or upon request by the Secretary shall be certified by a responsible

official. Where appropriate, the registrant may maintain records electronically.

3.5.2. Odors. For the purposes of 45CSR4, the registrant shall maintain a record of all odor complaints

received, any investigation performed in response to such a complaint, and any responsive

action(s) taken. [45CSR§4. State Enforceable Only.]

3.6. Reporting Requirements

3.6.1. Responsible official. Any application form, report, or compliance certification required by this

permit to be submitted to the DAQ andlor USEPA shall contain a certification by the responsible

official that states that, based on information and belief formed after reasonable inquiry, the

statements and information in the document are true, accurate, and complete.

3.6.2. Confidential information. A registrant may request confidential treatment for the submission of

reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-

5-10 and 45CSR31.

3.6.3. Correspondence. All notices, requests, demands, submissions and other communications

required or permitted to be made to the Secretary of DEP andlor USEP A shall be made in writing

and shall be deemed to have been duly given when delivered by hand, e-mailed or mailed first

class with postage prepaid to the address(es) set forth below or to such other person or address as

the Secretary of the Department of Environmental Protection may designate:

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If to the DAQ:

Director

WVDEP

Division of Air Quality

601 57th Street SE

Charleston, WV 25304-2345

If to the US EPA:

Associate Director

Office of Air Enforcement and Compliance Assistance

(3AP20)

U.S. Environmental Protection Agency

RegionITI

1650 Arch Street

Philadelphia, PA 19103-2029

3.6.4. Emission inventory. At such time(s) as the Secretary may designate, the registrant herein shall

prepare and submit an emission inventory for the previous year, addressing the emissions from the

facility and/or process(es) authorized herein, in accordance with the emission inventory submittal

requirements of the DAQ. After the initial submittal, the Secretary may, based upon the type and

quantity of the pollutants emitted, establish a frequency other than on an annual basis.

3.6.5. Operating Fee

3.6.5.1. In accordance with 45CSR22 - Air Quality Management Fee Program, the registrant shall not

operate nor cause to operate the permitted facility or other associated facilities on the same or

contiguous sites comprising the plant without first obtaining and having in current effect a

Certificate to Operate (CTO). Such Certificate to Operate (CTO) shall be renewed annually,

shall be maintained on the premises for which the certificate has been issued, and shall be

made immediately available for inspection by the Secretary or his/her duly authorized representative.

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4.0. Source-Specific Requirements

4.1. Limitations and Standards

4.1.1. Operation and Maintenance of Air Pollution Control Equipment and Emission Reduction Devices.

The registrant shall, to the extent practicable, install, maintain, and operate all pollution control

equipment and emission reduction devices listed in the issued General Permit Registration and

associated monitoring equipment to comply with limits set forth in this General Permit or as set

forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR§13-S.11.]

4.1.2. Applicability of State and Federal Regulations. The registrant is subject to the provisions of the

following State Rules and Federal Regulations, to the extent applicable based on its registration:

a. 45CSR2 - Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers

b. 45CSR6 - To Prevent and Control Air Pollution from the Combustion of Refuse

c. 45CSR10 - To Prevent and Control Air Pollution from the Emissions of Sulfur Oxides

d. 45CSR13 - Permits for Construction, Modification, Relocation and Operation of Stationary

Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation

e. 45CSR16 - Standards of Performance for New Stationary Sources Pursuant to 40 CFR Part 60

f. 45CSR22 - Air Quality Management Fee Program

g. 40CFR60 Subpart nn -Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

h. 40CFR60 Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

1. 40CFR60 Subpart 0000 - Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which Construction, Modification or Reconstruction Commenced after August 23,2011, and on or before September 18, 2015.

j. 40CFR60 Subpart 0000a- Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution for which Construction, Modification or Reconstruction Commenced after September 18, 2015.

k. 40CFR63 Subpart HH - National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities

1. 40CFR63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines

4.2. Recordkeeping Requirements

4.2.1. Monitoring information. The registrant shall keep records of monitoring information that include

the following:

- a. The date, place as defined in this permit and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

4.2.2. Record of Maintenance of Air Pollution Control Equipment and Emission Reduction Devices. For

all pollution control equipment and emission reduction devices listed in the General Permit

Registration, the registrant shall maintain accurate records of all required pollution control

equipment and emission reduction devices inspection and/or preventative maintenance procedures

specifically required in this General Permit.

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4.2.3. Record of Malfunctions of Air Pollution Control Equipment and Emission Reduction Devices. For

all air pollution control equipment and emission reduction devices listed in the General Permit

Registration, the registrant shall maintain records of the occurrence and duration of

any malfunction or operational shutdown of the air pollution control equipment and emission reduction devices during which excess emissions above the applicable permit limit occur. For

each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall

also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

5.0. Source-Specific Requirements [Gas and Oil Well Affected Facility (NSPS, Subpart 0000/0000a)]

5.1. Limitations and Standards

5.1.1. The registrant of each gas well affected facility which commenced construction, modification or

reconstruction after August 23, 2011, and on or before September 18, 2015 shall comply with the

applicable requirements specified in 40 CFR Part 60, Subpart 0000.

5.1.2. The registrant of each gas well affected facility which commenced construction, modification or

reconstruction after September 18, 2015 shall comply with the applicable requirements specified

in 40 CFR Part 60, Subpart 0000a.

5.1.3. Completion Combustion Devices/Temporary Flares/Incinerators/Vapor Combustors/Enclosed

Combustors. These devices are subject to the applicable requirements specified in 45CSR6.

6.0. Source-Specific Requirements [Storage Vessels Containing Condensate and/or Produced Water]

6.1. Limitations and Standards

6.1.1. Emissions determination. The registrant shall determine the VOC emissions for each storage

vessel (as defined in § 60.5430, 60.5430a) to determine affected facility status in accordance with

the emissions determination required below:

- a. All storage vessels that commenced construction, modification or reconstruction after August

23, 2011, and on or before September 18, 2015 must use the emissions determination in § 60.5365.

b. All storage vessels that commenced construction, modification or reconstruction after

September 18, 2015 must use the emissions determination in § 60.5365a.

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6.1.2. Control Devices. The registrant shall install, operate, and maintain all control devices listed in the

G70-D General Permit Registration for the purpose of controlling emissions from the storage

vessels in accordance with what was recorded with the registrant's General Permit Registration

Application.

1. Control Devices that are not subject to the control device requirements of NSPS, Subparts

0000/0000a .. If the registrant has determined per section 6.1.1 of this general permit that

the storage vessel(s) are not subject to control requirements of 40CFR60 Subparts

0000/0000a, the registrant shall choose whether they want to be subject to the control

device and closed vent system requirements of section 7.0 or section 8.0 of this general

permit.

2. Control Devices that are subject to the control device requirements of NSPS, Subparts

0000/0000a.

1. If the registrant has determined per section 6.1.1 of this general permit that the storage

vessel(s) are subject to control requirements of 40CFR60 Subparts 0000/0000a, the

registrant shall be subject to the control device and closed vent system requirements of

section 7.0 of this general permit.

11. The registered enclosed combustion device, flare or incinerator is subject to 45CSR6.

The registrant is subject to the applicable requirements specified in 45CSR6.

6.1.3. Site specific sample. (Only jar storage vessels with no air pollution control devices or VRUs)

1. Applicability. The requirements of this section apply to storage vessels that meet the

requirements of paragraphs (a) and (b).

a. Any storage vessel that contains condensate and/or produced water.

b. Any storage vessel that is not subject to the control device requirements of section 6.1.2

of this general permit.

c. Any storage vessel that has an upstream low pressure tower/stabilization equipment that

meets the requirements of section 6.1.4 of this general permit is exempt from the requirements of this section.

2. For registrants that meet the applicability requirements of paragraph (1) of this section, the

registrant shall use a site specific sample to determine potential emissions. The registrant

shall comply with the following:

i. The site specific sample shall be taken within thirty (30) days after startup of production.

ii. The type and location of the sample shall be appropriate for the calculation methodology

or model (e.g. ProMax, E&P Tanks, HYSYS) being used to calculate the emissions. The sample location shall be equipped with appropriate sampling access.

iii. If the VOC potential emissions are higher than the emission limits in the registration,

DAQ shall be notified in accordance with section 6.4.2.

a. The registrant shall re-evaluate the VOC potential emissions based on the site specific sample within 90 days of receiving the analysis of the site specific sample determined per section 6.1 .1 of this general permit.

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6.1.4. Low Pressure Towers/Stabilization Equipment. If the registrant calculated their voe flash

emissions for their General Permit Registration Application based on operating conditions using a

low pressure tower/stabilization equipment upstream of the storage vessels, the registrant shall

provide notification requirements listed in section 6.4.1 to DAQ in accordance with sections 1.1.3

and 1.1.4 of this general permit if the low pressure tower/stabilization equipment is removed from

service. If the vents from the storage vessels storing liquids from the low pressure tower/stabilization equipment are uncontrolled, then the low pressure tower operating pressure

shall not exceed the value used to determine the voe flash emissions.

For the purposes of General Permit G70-D, stabilization equipment refers to equipment, skids, or

combinations thereof forming additional processes that involve heat, pressure reduction and

separation, or by other means, are designed to stabilize condensate products in order to minimize

tank flash and limit Reid Vapor Pressure.

6.2. Monitoring Requirements

6.2.1. Flash emissions.

1. The requirements of this section apply to storage vessels that meet the requirements of

paragraphs (a) and (b) of this section.

a. Any storage vessel that contains condensate and/or produced water.

b. Any storage vessel that is not subject to the control device requirements of 6.1.2.

c. Any storage vessel that has a VRU system that is designed and operated in accordance with section 8.1.7 of this general permit is exempt from the requirements of this section.

2. The registrant shall monitor and maintain quarterly records of the temperature and pressure

upstream of any storage vessel containing condensate and/or produced water at the appropriate separation unit based on the calculation methodology or model being used by the registrant to calculate their voe flash emissions.

6.2.2. Uncontrolled production storage vessels that are fed by a gas to liquid separator shall perform the

following:

1. Inspect and maintain records of the separator liquid level that opens the dump valve on an as

needed basis and annually (at a minimum).

2. Inspect and maintain records of the separator dump valves operation per manufacturer recommendations or annually (at a minimum).

6.3. Recordkeeping Requirements

6.3.1. The registrant shall maintain a record of the aggregate throughput for the storage vessel(s) that

contains condensate and/or produced water on a monthly and rolling twelve (12) month total.

Alternatively, recording the monthly and rolling twelve (12) month total of condensate and/or

produced water loaded into tanker trucks from the storage vessels according to section 14.2.1 can

be used to demonstrate compliance. Said records shall be maintained in accordance with section

3.5.1 of this general permit.

6.3.2. To demonstrate compliance with section 6.1.1 of this general permit, the registrant shall maintain

records of the determination of the voe emission rate per storage vessel, including identification

of the model or calculation methodology used to calculate the voe emission rate.

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6.3.3. To demonstrate compliance with section 6.1.3 of this general permit, the

registrant shall maintain

records of the type of sample taken, the location of the sample within the process, the temperature

at the location and time where the sample was taken, the pressure at the location and time that the

sample was taken, the analysis of the sample, and the resulting emissions calculations using the

site specific sample.

6.4. Notification and Reporting Requirements

6.4.1. To demonstrate compliance with requirement 6.1.4 of this general permit, the registrant shall

notify the Director of the DAQ in writing when a low pressure tower/stabilization equipment that

meets the conditions of 6.1.4 of this general permit is removed from service. The notification

shall:

1. Include revised flash emission calculations for any storage vessel with emission limits in the

registration based on a site specific sample in accordance with 6.1.3 of this general permit to

demonstrate that the emission limits will not be exceeded as a result of the change in operating conditions;

11. Include the date that the low pressure tower/stabilization equipment was (or will be) removed

from service;

6.4.2. The registrant shall notify the Director of the DAQ in writing for any instance when the potential

emissions determined with a site specific sample in accordance with section 6.1.3 of this general

permit were greater than the potential emissions provided in the G70-D general permit application.

Any increase in emissions must follow the notification requirements in section 1.1.3 of this

general permit. Additional notification is required if the change in emissions affects applicability

determination to NSPS, Subparts 0000/0000a for any storage vessel. The notification to the

Director shall be provided no later than 30 days from the date of discovery of the NSPS, Subparts

0000/0000a applicability change.

7.0. Source-Specific Requirements [Standards of Performance for Storage Vessel Affected Facilities (NSPS, Subpart 0000/0000a)]

7.1. Limitations and Standards

7.1.1. The registrant of each storage vessel affected facility that commenced construction, modification

or reconstruction after August 23, 2011, and on or before September 18, 2015 shall comply with

the applicable requirements specified in 40 CFR Part 60, Subpart 0000, unless they have installed a VRU or have Federally Enforceable Controls to limit each storage vessel(s) potential to

emit below 6 tons per year of Volatile Organic Compounds.

7.1.2. The registrant of each storage vessel affected facility that commenced construction, modification

or reconstruction after September 18, 2015 shall comply with the applicable requirements

specified in 40 CFR Part 60, Subpart 0000a, unless they have installed a VRU or have Federally

Enforceable Controls to limit each storage vessel(s) potential to emit below 6 tons per year of

Volatile Organic Compounds.

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8.0. Source-Specific Requirements [Control Devices and Emission Reduction Devices not subject to NSPS Subpart 0000/0000a and/or NESHAP Subpart HH]

8.1. Limitations and Standards

Scope: The scope of this section is to address requirements for control devices and emission reduction

devices that will be installed and operated to control air emissions at a natural gas production

facility and that are not subject to NSPS, Subpart 0000/0000a or NESHAP, Subpart HH requirements. If the control device is subject to NSPS, Subpart 0000/0000a control device

and closed system requirements, they are subject to Section 7. 0.

Possible control and emission reduction devices meeting the scope of this section include: (1)

control devices used to control VOC and HAP emissions from the tanker truck loading operations;

(2) control devices used to control VOC and HAP emissions from the storage vessel(s) below the

NSPS, Subpart 0000/0000a threshold of 6 tpy VOC. Control devices that are permitted under

a legally and practically enforceable state permit achieve a "federally enforceable PTE" for VOC

emissions at the storage vessels; and (3) control devices used to control VOC and HAP emissions

from dehydration units.

8.1.1. Operation and Maintenance of Air Pollution Control Equipment and Emission Reduction Devices.

The registrant shall, to the extent practicable, install, maintain, and operate all air pollution control

equipment and emission reduction devices listed in the General Permit Registration and associated

monitoring equipment in a manner consistent with safety and good air pollution control practices

for minimizing emissions, or comply with any more stringent limits set forth in this permit or as

set forth by any State rule, Federal regulation, or alternative control plan approved by the

Secretary.

[45CSR§13-5.11.]

8.1.2. Enclosed Combustion Devices and Flares. The registrant shall comply with the requirements in

this section for any registered enclosed combustion device or flare that is listed as a control device

in the General Permit Registration:

1. The registrant may use the same control device to control emissions from multiple emission

sources (ex. storage vessels, loading racks, etc.) where the control device is both subject to

and not subject to NSPS, Subpart 0000I0000a requirements depending on the emission source being controlled and if the control device was designed accordingly. If the registrant

uses the control device for multiple source types, they shall comply with the more stringent

NSPS, Subpart 0000/0000a closed vent system and control device requirements for the entire system and shall comply with the applicable NSPS, Subpart 0000I0000a closed vent system and control requirements for storage vessels provided in section 8.0 of this

general permit.

2. Flares. If the registrant utilizes a flare control device, the registrant shall comply with the

design and operating requirements below:

i. Vapors that are being controlled by the flare shall be routed to the flare at all times.

ii. Flares shall be operated with a flame present at all times, as determined by the methods

specified in section 8.2.1 of this general permit;

iii. Flares shall be designed according to the requirements specified in § 60.18;

iv. Flares shall be operated at all times when emissions are vented to them;

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v. To ensure compliance with 8.1.2.2 (iv) of this general permit, the registrant shall monitor

in accordance with section 8.2.1 of this general permit.

VI. Flares shall be designed for and operated with no visible emissions as determined by the

methods specified in permit section 8.3.1 of this general permit except for periods not to

exceed a total of 5 minutes during any 2 consecutive hours; and,

vii. The registrant shall monitor the flare(s) to ensure that they are operated and maintained in

conformance with their designs.

The registrant may claim a capture and control efficiency of 98% for those units meeting the

requirements of 2.i-vii.

3. Enclosed Combustion Devices. If the registrant utilizes an enclosed combustion control

device, the registrant shall comply with the design and operating requirements below:

i. Vapors that are being controlled by the enclosed combustion device shall be routed to the

enclosed combustion device at all times.

ii. The enclosed combustion device shall be operated with a flame present at all times, as

determined by the methods specified in sections 8.2.1 and 8.2.3 of this general permit.

111. Enclosed combustion devices shall be designed for and operated with no visible emissions as determined by the methods specified in section 8.3.1 of this general permit

except for either (a) or (b):

a. periods not to exceed a total of one minute during any 15 minute period, determined on a monthly basis; or

b. periods not to exceed a total of two (2) minutes during any hour, determined on a quarterly basis if the enclosed combustion device installed was a model tested under § 60.5413(d) which meets the criteria in § 60.5413(d)(11).

IV. Enclosed combustion devices shall be operated at all times when emissions are vented to

them.

v. To ensure compliance with 8.1.2.3(iv) above, the registrant shall monitor in accordance

with section 8.2.3 of this general permit.

vi. The registrant shall operate and maintain the enclosed combustion device according to

the manufacturer's specifications for operating and maintenance requirements to maintain

the guaranteed control efficiency listed in the General Permit Registration.

The registrant may claim a capture and control efficiency of 98% for those units meeting the

requirements of 3.i-vi.

4. Closed Vent System. The registrant shall comply with the closed vent system requirements in

section 8.1.4.

5. Maximum Design Heat Input. The total maximum design heat input for all registered

flares or

enclosed combustion devices shall not exceed a Maximum Design Heat Input of 36 MMBTU/hr.

6. The registered enclosed combustion device or flare is subject to the applicable requirements

specified in 45CSR6.

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8.1.3. Cover Requirements. The registrant shall comply with the cover requirements in this section if the

potential emissions that were calculated to determine affected facility status did include recovered

vapors from the storage vessel as allowed and in accordance with 6.1.2 of this general permit.

1. The cover and all openings on the cover (e.g., access hatches, sampling ports, pressure relief

valves and gauge wells) shall form a continuous impermeable barrier over the entire surface

area of the liquid in the storage vessel.

2. Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed

lid or cap) whenever material is in the unit on which the cover is installed except during those

times when it is necessary to use an opening as follows:

(i) To add material to, or remove material from the unit (this includes openings necessary to

equalize or balance the internal pressure of the unit following changes in the level of the

material in the unit);

(ii) To inspect or sample the material in the unit;

(iii) To inspect, maintain, repair, or replace equipment located inside the unit; or

(iv) To vent liquids, gases, or fumes from the unit through a closed-vent system designed and

operated in accordance with the requirements of this general permit to a control device or to a process.

3. Each storage vessel thief hatch shall be weighted and properly seated. You must select gasket

material for the hatch based on composition of the fluid in the storage vessel and weather

conditions.

[45CSR§13-5.11.]

8.1.4. Closed Vent Systems (applies to all non 40CFR60 Subpart OOOO/OOOOa controls). The

registrant shall comply with the closed vent system requirements in this section if the

potential

emissions that were calculated to determine affected facility status did include recovered or

controlled vapors from the storage vessel as allowed and in accordance with 6.1.2 of this general

permit.

1. You must design the closed vent system to route all gases, vapors, and fumes emitted from the

material in the storage vessel to a control device that meets the requirements of 6.1.2 of this

general permit or to a process.

2. You must design and operate a closed vent system with no detectable emissions, as determined following the procedures in section 12.0 of this general permit for ongoing compliance.

3. You must comply with either paragraph (A) or (B) of this section for each bypass device.

A. You must properly install, calibrate, maintain, and operate a flow indicator at the inlet to the bypass device that could divert the stream away from the control device or process to the atmosphere that sounds an alarm, or initiates notification via remote alarm to the nearest field office, when the bypass device is open such that the stream is being, or could be, diverted away from the control device or process to the atmosphere.

B. You must secure the bypass device valve installed at the inlet to the bypass device in

the non-diverting position using a car-seal or a lock-and-key type configuration.

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ii. Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety

devices are not subject to the requirements of paragraph (i) of this section.

[45CSR§13-5.11.]

8.1.5. Carbon Adsorption Systems. The registrant shall comply with the requirements below for any

registered carbon adsorption system that is listed as a control device in the General Permit

Registration:

1. The carbon adsorption system shall be designed to achieve the minimum guaranteed control

efficiency that is listed in the General Permit Registration for volatile organic compound

(VOC) emissions;

ii. The carbon adsorption system must be operated at all times when gases, vapors, and fumes

are vented to it. Carbon canisters shall be operated in series as dual carbon canisters, in case

of emission breakthrough in one carbon canister.

iii. The carbon adsorption system must have a commercially manufactured saturation indicator

installed.

iv. Prior to the loading of each truck, the saturation indicator on the carbon adsorption system

shall be checked to ensure that the carbon is not spent. These records must be kept in accordance with section 3.5.1 of this general permit. If the saturation indicator demonstrates

that the carbon is saturated, truck loading is prohibited and/or emissions are to cease.

v. All carbon in the carbon canister shall be replaced with fresh carbon or the carbon canister

replaced with a new canister when the saturation indicator changes in color and indicates

saturation.

VI. Fresh replacements for all carbon being used in the carbon adsorption system shall be kept on

site.

The registrant may claim a control efficiency of 95% for those units meeting the requirements of

8.1.5 .i-vi.

8.1.6. Condensers/BTEX Eliminators. The registrant shall comply with the requirements below for any

registered condenser/BTEX Eliminator that is listed as a control device/emission reduction device

for a glycol dehydration unit in the General Permit Registration:

1. Vapors that are being controlled by the condenser/BTEX Eliminator shall be routed through a

closed vent system to the condenser/BTEX Eliminator at all times when there is a potential

that vapors (emissions) can be generated from the glycol dehydration still column.

ii. The condenser/BTEX Eliminator shall be designed, operated, and maintained according to

good engineering practices and manufacturer's specifications so as to achieve, at a minimum, a capture and control efficiency of 50%.

a. The registrant may claim a capture and control efficiency greater than 50% if the General

Permit Registration was approved based on manufacturer's specifications and the unit was operated as such.

8.1.7. Vapor Recovery Units (VRUs)

i. The registrant shall comply with the closed vent system requirements in Section 8.1.4 of this

general permit.

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ii. The registrant may claim a capture and control efficiency of 95% (which accounts for 5%

expected downtime).

iii. The registrant may claim a capture and control efficiency of 98% if the VRU has a backup

flare (enclosed combustion device) that meet the requirements of section 8.1.2 of this general

permit.

iv. The registrant may claim a capture and control efficiency of 98% if the VRU has a backup

VRU.

8.1.8. Glycol Dehydration Units Recycling Back to Flame Zone of the Reboiler. If the registrant is

reducing emissions by recycling the glycol dehydration unit back to the flame zone of the reboiler,

it shall be designed and operated in accordance with the following:

a. The vapors/overheads from the still column shall be routed through a condenser at all

times when there is a potential that vapors (emissions) can be generated from the still column.

b. The reboiler shall only be fired with vapors from the still column and flash tank, and

natural gas may be used as a supplemental fuel.

c. The vapors/overheads from the still column shall be introduced into the flame zone of the

reboiler as the primary fuel or with the primary fuel before the combustion chamber.

The registrant may claim a capture and control efficiency of 50% for those units meeting the

requirements of either a or b. The registrant may claim a capture and control efficiency greater

than 50% if the General Permit Registration was approved based on manufacturer's specifications

and the unit was operated as such.

8.2. Monitoring Requirements

8.2.1. To demonstrate compliance with the pilot flame requirements of sections 8.1.2.2 and 8.1.2.3 of

this general permit, the presence of a pilot flame shall be continuously monitored using a

thermocouple or any other equivalent device to detect the presence of a flame when emissions are

vented to it. The pilot shall be equipped such that it sounds an alarm, or initiates notification via

remote alarm to the nearest field office, when the pilot light is out.

8.2.2. To demonstrate compliance with the closed vent system requirements of section 8.1.4 of this

general permit, the registrant shall:

a. Initial requirements. The registrant shall follow the procedures in section 12.0 of this general

permit. The initial inspection shall include the bypass inspection, conducted according to

paragraph (b) of this section.

b. Bypass inspection. Visually inspect the bypass valve during the initial inspection for the

presence of the car seal or lock-and-key type configuration to verify that the valve is maintained in the non-diverting position to ensure that the vent stream is not diverted through

the bypass device. If an alternative method is used, conduct the inspection of the bypass as

described in the operating procedures.

c. Unsafe to inspect requirements. You may designate any parts of the closed vent system as

unsafe to inspect if the requirements in paragraphs (i) and (ii) of this section are met. Unsafe

to inspect parts are exempt from the inspection requirements of paragraphs (a) and (b) of this

section.

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1. You determine that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with the requirements.

ii. You have a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

[45CSR§13-5.11.]

8.2.3. To demonstrate compliance with the pilot flame requirements of sections 8.1.2.3 of this general

permit, the registrant shall follow (i) and (ii).

1. The presence of a pilot flame shall be continuously monitored using a thermocouple or any

other equivalent device to detect the presence of a flame when emissions are vented to it.

The pilot shall be equipped such that it sounds an alarm, or initiates notification via remote

alarm to the nearest field office, when the pilot light is out.

ii. For any absence of pilot flame, or other indication of smoking or improper equipment

operation, you must ensure the equipment is returned to proper operation as soon as

practicable after the event occurs. At a minimum, you must: (1) Check the air vent for obstruction. If an obstruction is observed, you must clear the obstruction as soon as practicable. (2) Check for liquid reaching the combustor.

iii. The registrant is exempt from the pilot flame requirements of permit condition 8.2.3.i and

8.2.3.ii if the registrant installed an enclosed combustion device model that was tested under

§ 60.5413(d) which meets the criteria in § 60.5413(d)(11).

8.3. Testing Requirements

8.3.1. To demonstrate compliance with the visible emissions requirements of section 8.1.2.2, 8.1.2.3,

and 8.1.2.6 of this general permit, the registrant shall conduct visible emission checks and/or

opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

i. The visible emission check shall determine the presence or absence of visible emissions. The

observations shall be conducted according to Section 11 of EPA Method 22. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the

presence of uncombined water (condensing water vapor) on the visibility of emissions. This

training may be obtained from written materials found in the References 1 and 2 from 40CFR

Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix

A, Method 9 certification course. The observation period shall be:

a. a minimum of 2 hours if demonstrating compliance with 8.1.2.2;

b. a minimum of 15 minutes if demonstrating compliance with 8.1.2.3 (iii)(a); or

c. a minimum of 1 hour if demonstrating compliance with 8.1.2.3 (iii)(b)

ii. The visible emission check shall be conducted initially within 180 days of start-up to

demonstrate compliance while vapors are being sent to the control device.

iii. If during this visible emission check or at any other time visible emissions are observed,

compliance with section 8.1.2.6 of this general permit shall be determined by conducting

opacity tests in accordance with Method 9 or 40 CFR 60, Appendix A.

8.3.2. A flare that is designed and operated in accordance with §60.18(b) shall not require a compliance

demonstration, unless at the request of the Secretary, but must conduct visible emission check.

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8.3 .3. Enclosed combustion devices or flares. At such reasonable times as the Secretary may designate,

the operator of any incinerator shall be required to conduct or have conducted stack tests to

determine the particulate matter loading, by using 40 CFR Part 60, Appendix A, Method 5, and

volatile organic compound loading, by using Methods 18 and 25A of 40 CFR Part 60, Appendix

A, Method 320 of 40 CFR Part 63, Appendix A, or ASTM D 6348-03 or other equivalent U.S.

EP A approved method approved by the Secretary, in exhaust gases. Such tests shall be conducted

in such manner as the Secretary may specify and be filed on forms and in a manner acceptable to

the Secretary. The Secretary may, at the Secretary's option, witness or conduct such stack tests.

Should the Secretary exercise his or her option to conduct such tests, the operator will provide all

the necessary sampling connections and sampling ports to be located in such manner as the

Secretary may require, power for test equipment and the required safety equipment such as

scaffolding, railings and ladders to comply with generally accepted good safety practices. The

Secretary may conduct such other tests as the Secretary may deem necessary to evaluate air

pollution emissions other than those noted above. [45CSR6 §§7.1 and 7.2)

8.4. Recordkeeping Requirements

8.4. 1. For the purpose of demonstrating compliance with the design requirements in section 8.1.2.2 of

this permit, the registrant shall maintain a record of the flare design evaluation. The flare design

evaluation shall include, net heat value calculations, exit (tip) velocity calculations, and all

supporting concentration calculations.

8.4.2. For the purpose of demonstrating compliance with the continuous pilot flame requirements in

sections 8.1.2.2 and 8.1.2.3 of this general permit, the registrant shall maintain records of the times

and duration of all periods when the pilot flame was not present and vapors were vented to the

device.

i. If the registrant is demonstrating compliance to 8.2.3 of this general permit with visual

inspections, the registrant shall maintain records of the inspections.

ii. If the registrant is demonstrating compliance to 8.2.3 of this general permit with an enclosed

combustion device model that was tested under the conditions of § 60.5413(d), a record

shall

be maintained of the performance test results.

8.4.3. For the purpose of demonstrating compliance with the visible emissions and opacity requirements,

the registrant shall maintain records of the visible emission opacity tests and checks. The registrant

shall maintain records of all monitoring data required by section 8.3.1 of this general permit

documenting the date and time of each visible emission check, the emission point or equipment!

source identification number, the name or means of identification of the observer, the results of the

check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective

measures taken or planned. The registrant shall also record the general weather conditions (i.e.

sunny, approximately 80°F, 6-10 mph NE wind) during the visual emission check(s). Should a

visible emission observation be required to be performed per the requirements specified in Method

9, the data records of each observation shall be maintained per the requirements of Method 9. For

an emission unit out of service during the evaluation, the record of observation may note "out of

service" (O/S) or equivalent.

8.4.4. To demonstrate compliance with section 8.1.2.3.vi of this general pennit, the registrant shall

maintain records of the manufacturer's specifications for operating and maintenance requirements

to maintain the control efficiency.

8.4.5. To demonstrate compliance with the closed vent monitoring requirements in section 8.2.2 of this

general permit, records shall be maintained of:

1. The initial compliance requirements;

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ii. If you are subject to the bypass requirements, the following records shall also be maintained:

(a) Each inspection or each time the key is checked out or a record of each time the alarm is

sounded;

(b) Each occurrence that the control device was bypassed. If the device was bypassed, the

records shall include the date, time, and duration of the event and shall provide the

reason that the event occurred. The record shall also include the estimate of emissions

that were released to the environment as a result of the bypass.

iii. Any part of the system that has been designated as "unsafe to inspect" in accordance with

8.2.2(d).

[45CSRS 13-5.11.]

8.4.6. To demonstrate compliance with section 8.1.5 of this general permit, records shall be kept on each

carbon canister to indicate the date when the activated carbon was replaced and the date of all

indicator checks.

8.4.7. The registrant shall maintain records of any testing that is conducted according to section 8.3 of

this general permit.

8.4.8. All records required under Section 8.4 shall be maintained on site or in a readily accessible off-site

location maintained by the registrant for a period of five (5) years. Said records shall be readily

available to the Director of the DAQ or his/her duly authorized representative for expeditious

inspection and review. Any records submitted to the agency pursuant to a requirement of this

permit or upon request by the Director shall be certified by a responsible official.

8.4.9. To demonstrate compliance with section 8.1.2.5 of this general permit, the registrant shall record

the volume of gas flared on a monthly basis.

8.5. Reporting Requirements

8.5.1. Any deviation of the allowable visible emission requirement for any emission source discovered

during observation using 40CFR Part 60, Appendix A, Method 9 per section 8.3.I(iii) of this

general permit must be reported in writing to the Director of the DAQ as soon as practicable,

but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the

following information: the results of the visible determination of opacity of emissions, the

cause or suspected cause of the violation(s), and any corrective measures taken or planned.

8.5.2. Any bypass event of the registered control device must be reported in writing to the Director of the

DAQ as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include,

at a minimum, the following information: the date of the bypass, the estimate of VOC emissions

released to the atmosphere as a result of the bypass, the cause or suspected cause of the bypass,

and any corrective measures taken or planned.

8.5.3. Any time the air pollution control device is not operating when emissions are vented to it, shall be reported in writing to the Director of the DAQ as soon as practicable, but within ten (10) calendar days of the discovery.

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9.0. Source-Specific Requirements [Small Heaters and Reboilers not subject to 40CFR60 Subpart Dc]

9.1. · Limitations and Standards

9.1.1. Maximum Design Heat Input. The maximum design heat input for any small heater and/or

reboiler shall be less than 10 MMBTU/hr.

9.1.2. No person shall cause, suffer, allow or pennit emission of smoke and/or particulate matter into the

open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six

minute block average. [45CSR§2-3.1.]

9.2. Monitoring Requirements

9.2.1. At such reasonable times as the Secretary may designate, the registrant shall conduct Method 9

emission observations for the purpose of demonstrating compliance with section 9.1.2 of this

general permit. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

9.3 Testing Requirements

9.3.1. Upon request by the Secretary, compliance with the visible emission requirements of section 9.1.2

of this general permit shall be detennined in accordance with 40 CPR Part 60, Appendix A,

Method 9 or by using measurements from continuous opacity monitoring systems approved by the

Secretary. The Secretary may require the installation, calibration, maintenance and operation of

continuous opacity monitoring systems and may establish policies for the evaluation of continuous

opacity monitoring results and the determination of compliance with the visible emission

requirements of section 9.1.2 of this general permit. Continuous opacity monitors shall not be

required on fuel burning units which employ wet scrubbing systems for emission control.

[45CSR§2-3.2.]

9.4. Recordkeeping Requirements

9.4 .1. The registrant shall maintain records of all monitoring data required by section 9.2.1 of this

general permit documenting the date and time of each visible emission check, the emission point

or equipment/source identification number, the name or means of identification of the observer,

the results of the check(s), whether the visible emissions are nonnal for the process, and, if

applicable, all corrective measures taken or planned. The registrant shall also record the general

weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual

emission check(s). Should a visible emission observation be required to be perfonned per the

requirements specified in Method 9, the data records of each observation shall be maintained per

the requirements of Method 9.

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10.0. Source-Specific Requirements [Pneumatic Controllers Affected Facility (NSPS, Subpart 0000/0000a)]

10.1. Limitations and Standards

10.1.1 . The registrant of each pneumatic controller affected facility that commenced construction,

modification or reconstruction after August 23,2011, and on or before September 18,2015 shall

comply with the applicable requirements specified in 40 CFR Part 60, Subpart 0000.

10.1.2. The registrant of each pneumatic controller affected facility that commenced construction,

modification or reconstruction after September 18, 2015 shall comply with the applicable

requirements specified in 40 CFR Part 60, Subpart 0000a.

11.0. Source-Specific Requirements [Pneumatic Pump Affected Facility (NSPS, Subpart 0000a)]

11.1. Limitations and Standards

11 .1.1. The registrant of each pneumatic pump affected facility that commenced construction,

modification or reconstruction after September 18,2015 shall comply with the applicable requirements specified in 40 CFR Part 60, Subpart 0000a.

12.0. Source-Specific Requirements [Fugitive Emissions GHG and VOC Standards (NSPS, Subpart 0000a)]

12.1. Limitations and Standards

12.1.1. The registrant of each affected facility (collection of fugitive emissions components at a well site)

that commenced construction, modification or reconstruction after September 18,2015 shall

comply with the applicable requirements specified in 40 CFR Part 60, Subpart 0000a.
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13.0. Source-Specific Requirements [Reciprocating Internal Combustion Engine(s)
(RICE), Generators, Microturbine Generators]

13.1. Limitations and Standards

13.1.1. The applicable RICE(s) and/or generator(s) shall be operated and maintained as follows:

a. In accordance with the manufacturer's recommendations and specifications or in accordance with a site specific maintenance plan; and,

b. In a manner consistent with good operating practices.

13.1.2. Requirements for Use of Catalytic Reduction Devices

a. Rich-burn natural gas-fired engine(s) equipped with non-selective catalytic reduction

(NSCR) air pollution control devices shall be fitted with a closed-loop, automatic air/fuel

ratio controller to ensure emissions of regulated pollutants do not exceed the emission limit

listed in the General Permit Registration for any engine\NSCR combination under varying load. The closed-loop, automatic air/fuel ratio controller shall control a fuel metering valve

to ensure a fuel-rich mixture and a resultant exhaust oxygen content of less than or equal to

2%.

b. Lean-burn natural gas engine(s) equipped with selective catalytic reduction (SCR) air

pollution control devices shall be fitted with a closed-loop automatic feedback controller to

ensure emissions of regulated pollutants do not exceed the emission limit listed in the General Permit Registration for any engine/SCR combination under varying load. The closed-loop automatic feedback controller shall provide proper and efficient operation of the

engine, ammonia injection and SCR device, monitor emission levels downstream of the catalyst element and limit ammonia slip to less than 10 ppmv.

c. Lean-burn natural gas engine(s) equipped with oxidation catalyst air pollution control

devices shall be fitted with a closed-loop automatic air/fuel ratio feedback controller to

ensure emissions of regulated pollutants do not exceed the emission limit listed in the General Permit Registration for any engine/oxidation catalyst combination under varying load. The closed-loop, automatic air/fuel ratio controller shall control a fuel metering valve

to ensure a lean-rich mixture.

d. For natural gas engine(s), the registrant shall monitor the temperature to the inlet of the

catalyst and in accordance with manufacturer's specifications; a high temperature alarm shall

shut off the engine before thermal deactivation of the catalyst occurs. If the engine shuts off

due to high temperature, the registrant shall also check for thermal deactivation of the

catalyst before normal operations are resumed.

e. The registrant shall follow a written operation and maintenance plan that provides the

periodic and annual maintenance requirements.

13.1.3. The registrant shall comply with all applicable NSPS for Stationary Compression Ignition

Internal Combustion Engines specified in 40 CFR Part 60, Subpart TIn, Stationary Spark Ignition

Internal Combustion Engines specified in 40 CFR Part 60, Subpart JJJJ, and/or the National

Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Spark Ignition and

Compression Ignition Internal Combustion Engines specified in 40 CFR Part 63, Subpart ZZZZ.

13.1.4. Periods of start-up and shut-down shall not exceed 30 minutes per occurrence. The registrant

shall operate the engine in a manner consistent with good air pollution control practices for

minimizing emissions at all times, including periods of start-up and shut-down. The registrant

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shall comply with all applicable start-up and shut-down requirements in accordance with 40 CPR

Part 60, Subparts IIII, JJJJ and 40 CFR Part 63, Subpart ZZZZ.

13.1.6. For the purposes of General Permit G70-D, emergency generator means a generator whose

purpose is to allow key systems to continue to operate without interruption during times of utility

power outages.

13.2. Monitoring Requirements

13.2.1. Catalytic Reduction Devices

a. The registrant shall regularly inspect, properly maintain and/or replace catalytic reduction

devices and auxiliary air pollution control devices to ensure functional and effective operation

of the engine's physical and operational design. The registrant shall ensure proper operation,

maintenance and performance of catalytic reduction devices and auxiliary air pollution control

devices by:

1. Maintaining proper operation of the automatic air/fuel ratio controller or automatic feedback controller.

2. Following the catalyst manufacturer emissions related operating and maintenance recommendations, or develop, implement, or follow a site-specific maintenance plan.

13.3. Recordkeeping Requirements

13.3.1. To demonstrate compliance with general permit section 13.1.2, the registrant shall maintain

records of the maintenance performed on each RICE and/or generator.

13.3.2. To demonstrate compliance with general permit sections 13.2.1, the registrant shall maintain a

copy of the site specific maintenance plan or manufacturer maintenance plan.

13.3.3. The registrant shall comply with all applicable recordkeeping requirements under NSPS for

Stationary Compression Ignition Internal Combustion Engines specified in 40 CFR Part 60,

Subpart IIII, Stationary Spark Ignition Internal Combustion Engines specified in 40 CFR Part 60,

Subpart JJJJ, and/or the National Emission Standards for Hazardous Air Pollutants (NESHAP) for

Stationary Spark Ignition and Compression Ignition Internal Combustion Engines specified in 40

CFR Part 63, Subpart ZZZZ.

13.3.4. All records required by this section shall be maintained in accordance with section 3.5.1 of this

general permit.

13.4. Testing Requirements

13.4.1. The registrant shall comply with all applicable testing requirements under NSPS for Stationary

Compression Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart IIII,

Stationary Spark Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart JJJJ,

and/or the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary

Spark Ignition and Compression Ignition Internal Combustion Engines specified in 40 CFR Part

63, Subpart ZZZZ.

13.4.2. To demonstrate compliance with general permit section 13.1.2(a), the registrant shall verify that

the closed-loop, automatic air/fuel ratio controller shall control a fuel metering valve to ensure a

fuel-rich mixture and a resultant exhaust oxygen content of less than or equal to 2% during any

performance testing.

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13.S. Reporting Requirements

13.5.1. The registrant shall comply with all applicable notification requirements under NSPS for

Stationary Compression Ignition Internal Combustion Engines specified in 40 CFR Part 60,

Subpart IIII, Stationary Spark Ignition Internal Combustion Engines specified in 40 CFR Part 60,

Subpart JJJJ, and/or the National Emission Standards for Hazardous Air Pollutants (NESHAP) for

Stationary Spark Ignition and Compression Ignition Internal Combustion Engines specified in 40

CFR Part 63, Subpart ZZZZ.

14.0. Source-Specific Requirements [Tanker Truck/Rail Car Loading]

14.1. Limitations and Standards

14.1.1. Control Devices and VR Us. The registrant shall install, operate, and maintain all control devices

and/or VRU(s) in accordance with the applicable requirements of section 8.0 of this general

permit.

14.1 .2. The following applicable capture efficiencies are required:

a. For tanker trucks and/or rail cars not passing one of the annual leak tests in 14.1.2 (b) or (c)

and has vapor return - 70%

b. For tanker trucks and/or rail cars passing the NSPS level annual leak test - 98.7%.

c. For tanker trucks and/or rail cars passing the MACT level annual leak test - 99.2%

Compliance with this requirement shall be demonstrated by keeping records of the applicable

MACT or NSPS Annual Leak Test certification for every truck and rail car loaded/unloaded. This

requirement can be satisfied if the trucking/rail car company provided certification that all tanker

trucks/rail cars servicing the location are compliant. This certification must be submitted with the

G70-D Annual Certification.

14.2. Recordkeeping Requirements

14.2.1. The registrant shall maintain monthly and annual records that include the total quantity of material

loaded into tanker trucks/rail cars. The annual records shall be calculated on a twelve (12) month

rolling total.

14.2 .2. For the purpose of demonstrating compliance with section 14.1.2, the

registrant shall maintain

records of the MACT and/or NSPS Annual Leak Tests of all trucks/rail cars loaded at the facility. This requirement can be satisfied if the trucking/rail car company provided certification

all tanker trucks/rail cars servicing the location was compliant. This certification must be

submitted in writing to the Director of the DAQ.

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15.0 Source-Specific Requirements [Glycol Dehydration Units]

15.1. Limitations and Standards

15.1.1. The registrant of each glycol dehydration unit subject to 40 CFR Part 63, Subpart HH shall

comply with the applicable requirements specified in 40 CFR Part 63, Subpart HH.

15.1.2. Emission Calculations.

a. For purposes of determining potential HAP emissions, the methods specified in 40 CFR 63,

Subpart HH shall be used.

b. Any source that has actual emissions of 5 tons per year or more of a single HAP, or 12.5 tons

per year or more of a combination of HAP (i.e., 50 percent of the major source thresholds),

shall update its major source determination within 1 year of the prior determination or October 15, 2012, whichever is later, and each year thereafter, using gas composition data

measured during the preceding 12 months. [40CFR§63.760(c)]

c. For the purposes of determining actual annual average natural gas throughput or actual

average benzene emissions, the methods specified in § 63.772(b) of 40 CFR 63, Subpart HH

shall be used if the registrant is exempt from § 63.764(d).

15.1.3. Control Devices and Emission Reduction Devices. The registrant shall comply with all applicable

control device and emission reduction device requirements provided in section 8.0 of this general

permit for any control device and emission reduction device used to control emissions from the

dehydration unit and that is listed in the G70-D General Permit Registration. Compliance will be

demonstrated according to the requirements listed in Section 8.0 of this general permit.

15.1.4. Maximum Glycol Recirculation Rate. The maximum glycol recirculation rate shall not exceed

the gallons per minute limit listed in the registrant's G70-D general permit application.

Compliance with the Maximum Glycol Recirculation Limitation shall be determined using an

average of a minimum of quarterly readings of the actual glycol pump(s) rate. If more than one

pump is operating simultaneously then the rate of each operating pump shall be recorded and

totaled for compliance purposes.

15.2. Monitoring Requirements

15.2.1. The registrant shall monitor the throughput of dry natural gas from the dehydration system on a

quarterly basis for each glycol dehydration unit at the facility.

15.2.2. Representative gas sample collection and analysis frequency for dehydration units shall be

determined as set forth in the schedule provided in Table 15.2.2 of this section.

Table 15.2.2

Wet Gas Sampling and Analysis Frequency for Dehydration Units

Based on Potential HAP Emission Rates

Each dehydration unit exempt from

§ 63.764(d) requirements and with Upon request by the Secretary.

federally enforceable controls

Each dehydration unit exempt from An initial compliance evaluation within 180 days

§ 63.764(d) requirements and without of registration issuance or within 180 days of federally enforceable controls start-up of the dehydration unit, whichever is later.

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15.2.3. To demonstrate compliance with area source status and the benzene exemption in 15.1.2.c, the

following parameters shall be measured at a minimum frequency of once per quarter, with the

exception of natural gas flowrate annual daily average, natural gas flowrate maximum design

capacity and wet gas composition, in order to define annual average values or, if monitoring is

not practical, some parameters may be assigned default values as listed below.

a. Natural Gas Flowrate

i. Operating hours per quarter

ii. Quarterly throughput (MMscf/quarter)

iii. Annual daily average (MMscf/day), and

iv. Maximum design capacity (MMscf/day)

b. Absorber temperature and pressure

c. Lean glycol circulation rate

d. Glycol pump type and maximum design capacity (gpm)

- e. Flash tank temperature and pressure, if applicable
- f. Stripping Gas flow rate, if applicable
- g. Wet gas composition (upstream of the absorber - dehydration column) sampled in accordance with GP A method 2166 and analyzed consistent with GP A extended method 2286 as well as the procedures presented in the GRI-GL YCalc™ Technical Reference User Manual and Handbook V4
- h. Wet gas water content (lbs H2O/MMscf)
- i. Dry gas water content (lbs H2O/MMscf) at a point directly after exiting the dehydration column and before any additional separation points

The following operating parameter(s) may be assigned default values when using GRI-GLYCalc:

- a. Dry gas water content can be assumed to be equivalent to pipeline quality at 7 lb H2O /

MMscf

- b. Wet gas water content can be assumed to be saturated

- c. Lean glycol water content if not directly measured may use the default value of 1.5 %

water as established by GRI

- d. Lean glycol circulation rate may be estimated using the TEG recirculation ratio of 3 gal

TEG / lb H2O removed.

Note: If you are measuring and using actual wet or dry gas water content, then you should

also measure the glycol circulation rate rather than using the default TEG recirculation

ratio.

1 45CSR§ 13-5.11, §63. 772(b) (2) (i)]

15.3. Testing Requirements

15.3.1. The registrant shall sample wet natural gas in accordance with the Gas Processor Association

(GPA) Method 2166 and analyze the samples in accordance with GPA Method 2286. The registrant may utilize other equivalent methods provided they are approved in advance by DAQ as

part of a testing protocol. If alternative methods are proposed, a test protocol shall be submitted

for approval no later than 60 days before the scheduled test date.

Note: The DAQ defines a representative wet gas sample to be one that is characteristic of the

average gas composition dehydrated throughout a calendar year. If an isolated sample is not

indicative of the annual average composition, then a company may opt to produce a weighted

average based on throughput between multiple sampling events, which can be used to define a

more representative average annual gas composition profile.

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15.4. Recordkeeping Requirements

15.4.1. The registrant shall maintain records of the monthly dry natural gas throughput through the

glycol dehydration unit(s), all monitoring data, wet gas sampling, and GRI-GLYCalc™ emission

estimates. Said records shall be maintained in accordance with section 3.5.1 of this general

permit.

15.5. Reporting Requirements

15.5.1. The registrant shall submit the wet gas analysis report required by section 15.2 of this general

permit within 60 days of conducting the sampling of the wet gas stream as required. This report

shall include a potential to emit (PTE) estimate using GRI-GlyCalc Version 3.0 or higher,

incorporating the specific parameters measured, as well as a copy of the laboratory analysis.

15.5.2. If the results of the compliance determination conducted as required in Section 15.2 of this

general permit predict the emissions to be at or above 0.95 tons per year of benzene, the registrant

shall submit such determination and all supporting documentation to the Secretary within 15 days

after making such determination.

West Virginia Department of Environmental Protection · Division of Air Quality

G70-D 370f37

Natural Gas Production Facility

CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable

inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature'

(please use blue ink) Responsible Official or Authorized Representative Date

Name & Title

(please print or type) Name Title

Telephone No. FaxNo. _____

This form shall be signed by a "Responsible Official." "Responsible Official" means one

of the following:

a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a

principal business function, or any other person who performs similar policy or decision-making functions

for the corporation, or a duly authorized representative of such person if the representative is responsible

for the overall operation of one or more manufacturing, production, or operating facilities applying for or

subject to a permit and either:

(i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25

million (in second quarter 1980 dollars), or

(ii) the delegation of authority to such representative is approved in advance by the Director;

b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking

elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the

chief executive officer having responsibility for the overall operations of a principal geographic unit of the

agency (e.g., a Regional Administrator of U.S. EPA); or

d. The designated representative delegated with such authority and approved in advance by the Director.

West Virginia Department of Environmental Protection · Division of Air Quality